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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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10/669375	9-25-03	Niels Erikstrup	H0610.0353/P353
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EXAMINER

W. Langel

ART UNIT

PAPER NUMBER

1754

DATE MAILED:

EXAMINER INTERVIEW SUMMARY RECORD

All participants (applicant, applicant's representative, PTO personnel):

(1) <u>Ms. Coman</u>	(3) <u>Ms. Jennifer McCue</u>
(2) <u>Examiner Langel</u>	(4) <u>Mr. Seitz</u>

Date of interview 11-16-05Type: ☐ Telephonic ☒ Personal (copy is given to ☐ applicant ☒ applicant's representative).Exhibit shown or demonstration conducted: ☐ Yes ☒ No. If yes, brief description: _____Agreement ☒ was reached with respect to some or all of the claims in question. ☐ was not reached.Claims discussed: 1-11Identification of prior art discussed: as applied in last office Action and
~~US 2004/006378~~

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

The participants pointed out that applicant's specification states that recirculation of the tail gas to the feed to the adiabatic pre-reformer is disadvantageous, and argued that there would be no motivation to recirculate tail gas in the specific system (cont. exp. 2)

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☐ 1. It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph below has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW (e.g., items 1-7 on the reverse side of this form). If a response to the last Office action has already been filed, then applicant is given one month from this interview date to provide a statement of the substance of the interview.

☐ 2. Since the examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the substance of the interview unless box 1 above is also checked.

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(1) _____ (3) _____

(2) _____ (4) _____

Date of interview _____

Type: ☐ Telephonic ☐ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☐ No. If yes, brief description: _____

Agreement ☐ was reached with respect to some or all of the claims in question. ☐ was not reached.

Claims discussed: _____

Identification of prior art discussed: _____

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: *(Cont. from page 1)*

as recited in claim 1. The participants proposed an amendment, as attached hereto. The examiner agreed that claims 1-10 appeared to be allowable, but pointed out that claim 11 is directed to a separate and distinct invention.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

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Wayne A. Lange

Interview Summary

DRAFT

Docket No.: H0610.0353/P353
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Niels Erikstrup et al.

Application No.: 10/669,375

Confirmation No.: 3361

Filed: September 25, 2003

Art Unit: 1754

For: PROCESS FOR THE PREPARATION OF
SYNTHESIS GAS

Examiner: W. A. Langel

AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated October 13, 2005, please amend the above-identified U.S. patent application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 4 of this paper.

AMENDMENTS TO THE CLAIMS

1. (Original) Process for the production of synthesis gas by catalytic steam reforming of a hydrocarbon containing feedstock in parallel in an autothermal steam reformer and in one or more steam reformers in series, the heat for the steam reforming reactions in the one or more steam reformers being provided by indirect heat exchange with the combined effluents from the one or more steam reformers with the autothermal steam reformer, and wherein carbon monoxide containing gas is added to the feedstock prior to the steam reforming in the autothermal steam reformer and/or prior to the steam reforming in the one or more steam reformers, the carbon monoxide containing gas having a molar ratio of hydrogen to carbon of less than 4.5 and being added in an amount resulting in a product stream having a molar ratio of hydrogen to carbon monoxide of between about 1.8 and 2.3.

2. (Currently amended) ~~Process~~ The process according to claim 1, wherein the one or more steam reformers are adiabatic steam reformers and/or heat exchange steam reformers.

3. (Currently amended) ~~Process~~ The process according to claim 2, wherein the feedstock to the one or more adiabatic steam reformers is preheated by indirect heat exchange with the combined effluents from the one or more steam reformers and the autothermal steam reformer.

4. (Currently amended) ~~Process~~ The process according to claim 2, wherein the heat for the heat exchange reformer is provided by indirect heat exchange with the combined effluents from the one or more steam reformers and the autothermal steam reformer.

5. (Currently amended) ~~Process~~ The process according to claim 1, wherein catalyst in at least one of the steam reformers is in form of pellets or catalysed hardware.

6. (Currently amended) ~~Process~~ The process according to claim 5, wherein the catalysed hardware is arranged on structured metallic or ceramic elements or on monoliths.

7. (Currently amended) ~~Process~~ The process according to claim 1, wherein the active catalytic material in a first of the steam reformers is nickel and the active material in a last of the steam reformers is a noble metal or a mixture of noble metals.

8. (Currently amended) ~~Process~~ The process according to claim 3, wherein the preheating is combined with catalytic steam reforming between at least one of the adiabatic steam reformers.

9. (Currently amended) ~~Process~~ The process according to claim 1, wherein an oxidant to the autothermal steam reformer contains at least 90% oxygen by volume.

10. (Currently amended) ~~Process~~ The process according to claim 1, wherein the carbon monoxide containing gas is tail gas from a Fischer-Tropsch process.

11. (New) A process for the production of synthesis gas by catalytic steam reforming of a hydrocarbon containing feedstock in parallel in an autothermal steam reformer and in a plurality of steam reformers in series, the heat for the steam reforming reactions in the plurality of steam reformers being provided by indirect heat exchange with the combined effluents from the plurality of steam reformers with the autothermal steam reformer.

Application No. 10/669,375
Reply to Office Action of October 13, 2005

Docket No.: H0610.0353/P353

REMARKS

Allowance of the application is solicited.

Dated:

Respectfully submitted,

By _____

Stephen A. Soffen

Registration No.: 31,063

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